VIDEO CAPTURE DEVICE AND METHOD OF SENDING HIGH QUALITY VIDEO OVER A LOW DATA RATE LINK

Abstract of the Disclosure

A video reception device, such as personal computer, generates high quality video from video data received from a video capture device over a low data rate communication interface such as a USB interface. The video data is received by the reception device in two passes. The first pass provides a low frequency portion of coefficients and the second pass provides a high frequency portion of coefficients. The coefficients representing the video are generated by performing a Discrete Cosine Transform (DCT) on blocks of pixels and compressing a portion of the coefficients. In one embodiment, the video reception device matches a frame received during the first pass with a frame received during the second pass and signals the video capture device to switch from compressing the low frequency portion of coefficients to compressing the high frequency portion. In an alternate embodiment, frames received in the first and second passes are stored at the reception device and a key frame may be used to synchronize the frames received from each pass.